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LONDON TO LAHORE:

OR

THE EUPHRATES, SCINDE AND PUNJAUB RAILWAYS.

REPRINTED FROM RECENT INDIAN PAPERS FROM THE THREE PRESIDENCIES:—

1. THE "SINDHIAN."
2. THE "SINDH KOSSID."
3. THE "BOMBAY GAZETTE."
4. THE "LAHORE CHRONICLE."
5. THE "FRIEND OF INDIA."
6. THE "CALCUTTA ENGLISHMAN."
7. THE "MADRAS ATHENÆUM."
8. THE "SINDHIAN."

WITH

DIGEST OF TRADE OF SYRIA AND MESOPOTAMIA,
LAST REPORT OF PUNJAUB GOVERNMENT ON RAILWAYS,

AND

MAP.

"He hoped to see the Euphrates Railway, the Scinde Railway, and the Punjaub Railway all being constructed simultaneously, being the three links of the grand chain which would connect Central Asia with Europe."—*Speech of Chairman of Scinde Railway Company at General Meeting, 18th Feb.*, 1857.

"The rapidity with which this [the connexion between England and India] can be carried out, the smallness of the outlay required, and the fact of the route being 1000 miles shorter than that of the Red Sea, are unanswerable recommendations." "And it is impossible to refer to the Surveys and Reports of General Chesney and his Colleagues on the Euphrates, published 20 years ago, without astonishment that even at that period the British Government and people failed to take immediate steps to avail themselves of its capabilities"

The Times, February 11*th*, 1857.

SECOND EDITION.

LONDON:
EFFINGHAM WILSON, ROYAL EXCHANGE.
1857.

Extract from the Speech of BARTLE FRERE, ESQ., *Commissioner in Scinde, at the General Meeting of the Scinde Railway Company, Feb.*, 1857.

"In reference to the Punjaub, the capacity of moving troops to a given point was of immense importance. In a military point of view the advantage would be this, that if the Khyber Pass should be closed to our forces, they could be moved with rapidity to the Bolan Pass, and in either case the enemy would be taken in flank or in the rear. The Euphrates Valley Railway would give them the command of the sea-board of the Persian Gulf, the completion of that railway would practically make Chatham nearer to any point of action in the Persian territory, than any military force which could be brought to bear upon it from Central Asia. If the triumphs of Great Britain are to be permanent, they must be rendered so by a mutuality of interests, by the material and civilising influences of expanding commerce. The great battle of the country for the tranquility of Central Asia must be fought at Manchester and Liverpool [hear, hear]. If we would command Central Asia, that dominion must be established by opening up a ready market for their raw produce, and subjecting them by the force of their own material interests."

LONDON TO LAHORE.

From the "Sindhian" of Jan. 7th, 1857.

THE magnificent design emanating from, and matured by, the genius of the chairman of the Sindh Railway Company, for linking London with Lahore by one continuous and direct chain of communication, is no longer looked upon by practical men as chimerical or Utopian. Step by step has the gigantic plan been developed; and whether we contemplate the grandeur of the whole in one general view, or descend to inquire into the specialities of each individual section, it must be acknowledged that the minutest scrutiny proves that the original conception was based on the surest data. The line by rail and steamer between Great Britain and the Levant has long been an established fact. From Southampton, Marseilles, and Trieste, steamers are constantly plying to and from the eastern ports of the Mediterranean. To continue this line by the most direct and economical route to Western India and the Punjaub is the object of Mr. Andrew and his numerous influential supporters. By last mail we learned that Sir John M'Neill and General Chesney had selected a spot in the immediate vicinity of the old port of Seleucia, which presented every facility for forming a harbour. From that point to the Euphrates they had

surveyed the whole country; and so favourable was it for the construction of a railway, that it was calculated the line might be laid down at 9000*l.* per mile, which, if compared with similar works in Europe and America, will be admitted to be very moderate indeed. The local traffic is found to be immense, and the existing rates of carriage very high.* The difficulties in the navigation of the Euphrates are by no means insuperable, and can be overcome by the application of modern science to their removal. Mr. Laird, of Birkenhead, has offered to build steamers suitable to the shallow stream of this river; and it is known to many in this province that Mr. Frere's time has been much engaged, whilst in England, in the formation of a joint-stock company for running a line

* With reference to the extension of commerce in these countries, I may cite that of Mossul — which is not included in the preceding returns. In 1844, £32,000 duty were paid by the Pasha of Mossul on goods valued at more than one million sterling. Our consul at that place, Mr. Rassam (who cultivates cotton rather extensively, and is now introducing the Sea Island plant), assures me that if the means of transport could be procured, there would be at least 300,000 camel loads annually of cotton, wool, wheat, barley, madder-roots, tobacco, etc., sent from Mossul for exportation. But this is only the increase that may be expected in one instance. A proportionately great one is likely to be the consequence of facility of transport elsewhere. Cotton, silk, and grain will, without any doubt, be more largely cultivated on the plains between Suedia and the river Euphrates. In fact, nothing is wanted but an outlet and moderate protection, to develop the resources of this large tract of country, — superior in fertility to Egypt, — and to produce an enormous commerce in Mesopotamia and Babylonia in cotton, wool, wheat, indigo, sugar, copper, tobacco, valonia, red and yellow berries, etc.—*Report on the Euphrates Valley Railway, by Major-General Chesney, R.A., F.R.S. Smith, Elder and Co., Cornhill,* 1857.

of steamers from Kurrachee to the Persian Gulf, and that he has met with almost unlooked-for support in this undertaking.*

* Those politicians who look a little before them consider that our danger from future military movements is to be found in Persia, and on the Persian Gulf. They cannot doubt the existence of Russian influence at Teheran. It is visible in the attack upon Herat, as it has been visible in the Persian policy for many years. We are at war with Persia; and, like fire, hostilities once commenced may spread. Russia promises to assist, meaning to devour Persia, and thereby to reach India. Neither Austria, nor France, care for Russian progress to the eastward of Hiddekel or Tigris, for a time. They see not that conquest there would soon be supremacy on the Mediterranean; would soon be victory at Constantinople. They could not help Stamboul if it were assailed from the East; and it would be of little importance whether they could or could not then help the Turk when he had nothing left to be helped in. Austria, in an agony of disappointment, might accept both banks of the Danube and Thessaly, in order to preserve the balance of power for three years. France, in the crisis of Asiatic danger, might seek a compensation in Africa; and stake against the waters of the Euphrates those of the Nile. A British diplomatist of a determined character might seek the development of the Euphratean Valley route, to prevent all this mischief. It brings us nearer our enemy by four weeks, or five, than through Egypt; and although some difficulties may arise for a time in passing through a neutral country, yet Turkey cannot long be neutral in this contest.

We have also upon our hands a battle against African slavery in America. It is daily waged upon the Exchanges and in our ports. If we could replace with free-grown cotton that of slave production, this foe would be nearly beaten. A railway from the Euphrates to the Mediterranean would increase the production of cotton in the region of the river. This process would impart prosperity to Turkey, which we want to be strong, or stronger than at present.

George Canning had credit for calling a new world into existence when he acknowledged the independence of the Spanish and Portuguese colonies in South America. That world is one of growth so slow that George Canning as yet has little credit except for intention, by the proceeding. The statesmen who may call Mesopotamia

It is on this (the Indus) part of the great highway that we would now offer a few remarks. The importance of such a line cannot possibly be overrated.

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into re-existence will achieve a greater triumph, or one that will be more directly and immediately felt. The commercial advantages likely to spring from the plains of Mesopotamia under tillage, might induce the Government to favour the direction of our existing business into the old and long dry channels; for they, like Hindostan itself, require the means of cheap conveyance before they can exhibit the results of good cultivation. Although wars had ceased for ever, roads would be requisite through the deserts, before they could bloom for any good social purpose, and over the wilderness, ere they could rejoice in temporal matters, and the vast region having its name, like the Punjaub, from its rivers, in its present state, is a loss to civilization and a reproach to the world, that all prudent men may well desire to have once more removed.—*London Mail.*

The Foreign-office are blamed for having gone to the promoters of this scheme before these gentlemen came to them. The circumstance shews that in the opinion of the Foreign-office the scheme evinced great practical sagacity. Very probably the Government did not say that they wanted to open new cotton fields, as Lord Palmerston stated at Manchester — or to establish corn fields independent of Russia, because it is better to deal with friends than foes — or that they wished to have two overland routes to India, because Egypt is more closely connected with France than might suit our purpose, if the alliance were not found durable; or that roads were wanted into Central Asia with the view of prosecuting the Persian trade, and especially of improving Mesopotamia; and it it is still less likely that the Government distinctly wrote that they wanted a railway on the Euphrates for strategical purposes, in the event of Russia making war through the Armenian mountains by and by; but all these reasons helped to form their opinion that the magnitude of this scheme justified a little departure from etiquette, and we consider it the most important proposal for British interests recently suggested. The rising trade of the district warrants an expenditure for its accommodation and extension. The importation of British goods in 1851 was equal to £146,305, and in 1855 it was £471,353. The extension of this trade is the more necessary,

Whether regarded in a political or commercial point of view, its speedy formation must be deemed of imperious necessity. The *Friend of India* very truthfully remarks that "no line more demands the earnest support of government." At a period when our relations on the north-western frontier are in a most precarious state, and when complications may arise demanding the movement of large bodies of troops in that direction, it must be evident that increased facilities for their transit are not only expedient but indispensable. At the present moment, with the means government have at their disposal, it would take months to assemble an army for defence or invasion on our frontier; whereas, with the lines completed that we have spoken of, 50,000 men might be conveyed in a shorter space of time from England to Affghanistan. Our local rulers have earnestly supported the completion of such a railway as that now proposed between Lahore and Umritsur. In a letter addressed by the chief commissioner of the Punjaub to the government of India, in the year 1855, the necessity for such a line was thus strongly urged, together with the proposal for placing eight steamers on the different rivers:—"Indeed, these two essentials — viz., the railroad and the steamers, may be

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as it is almost completely free from taxation, except that of bad roads, which will be partly removed by this scheme. The progress of Egypt is in every way interesting, but not more so than the prosperity of Syria and Assyria. As for India, it has a trade that will afford two roads, in or out, and however the Calcutta, Ceylon, and Madras trade may run, the Indus business will flow into the Euphrates channel. — *Tait's Magazine.*

said with truth to be the crying wants of the Punjaub in the department of public works. This provided, the commerce and produce of these territories will be turned to their due course — viz., the Indus and its feeders; and to their natural outlet — viz., the port of Kurrachee. For the railroad, the face of the Doab offers an unusual equality of surface, while it possesses few or none of the requisite resources for metalling a road. For the rivers, it were preferable, instead of improving the navigable stream, to concentrate all efforts in the provision of powerful steamers of the lightest possible draught. The chief commissioner, while deprecating any general extension of the Public Works Department in the Punjaub for the present, would yet beg most earnestly to press these cardinal objects on the attention of the government. He believes that if carried out they would affect more for the development of the resources of these territories than any other work, or number of works, that could be devised."

Our Serampore contemporary has alluded to the vast trade which converges from all parts of Central Asia to Umritsur, as the great *entrepôt* for the raw materials and products of this rich region. And, certainly, if we look to the official returns, we shall find that the existing traffic is enormous. Mr. Temple, the secretary to the chief commissioner in the Punjaub, in a letter written last April, stated:— "Recently a merchant of Umritsur informed the chief commissioner that the hire of carriages is not less than Rs. 1,000 per diem, half on account of passenger traffic, and half on account of goods." Now, that amount of revenue to a railway between the

two towns would pay a dividend of eight per cent. on the outlay, after clearing all expenses. In the same letter Mr. Temple says:—"But one important object of such a railway as that now under discussion must be the promotion of the trade between Umritsur and Kurrachee. This trade is already very considerable, amounting, as a merchant very recently informed the chief commissioner, to 80 lakhs of rupees in value annually. This traffic has, perhaps, been quadrupled since the annexation of the Punjaub, may still increase, and probably for the most part be conveyed by railway if constructed." "Besides the above railway might become the means of exporting the surplus produce of the Punjaub. Such surplus is already great; the productive power of the country is greater still. Cereals are, in ordinary years, beginning to glut the market. Wheat now sells at two maunds (of 80lb.) per rupee, and gram at three maunds. The urgent wants are markets and conveyance."

If, in connection with this statement, we take into consideration the traffic in the River Indus, we shall be able to form some conception of the necessity for increased facilities in our land and water communication, and the certainty of handsome realisations accruing to those who undertake to provide them. The amount of cargoes passing Mittenkote up and down the Lower Indus between 1st February and 31st July last year, was 1,144,012 maunds, equal at 80lb. per maund, to 40,861 tons! Deducting such items as grass and others, which probably go short distances, an amount of above 30,000 tons in six months appears as the approximate through traffic between the Punjaub and

the sea. It is certain, therefore, that the annual amount of traffic on the river from the Punjaub exceeds 60,000 tons. The greatly extended growth of linseed, and indigo [and cotton*], will every year increase this amount, whilst it must not be forgotten that the conveyance of the wheat and gram of the Punjaub has not been taken into account. There can be no doubt that the rapidly growing trade over the

* A recent correspondent of an Indian paper says:—"In April last (1855), I brought to England a small quantity of cotton (the raw material) grown from *acclimated* American cotton seed in a district on the banks of the river Jhelum; this specimen I had shown to several cotton spinners in Manchester. They pronounced it to be the finest specimen of cotton they had seen grown in India, even directly from American seed, and to be worth from 6¼d. to 6½d. per lb. Along the banks of our Punjaub rivers lie tracts of land admirably situated for the growth of cotton. It only requires steady encouragement on the part of the local government, trouble and perseverance on the part of the district officer, to cover those lands with cotton of the finest quality. The cotton that could thus be grown might, with ease and at trifling cost, be conveyed in country boats (until we have, as we ought to have, steamers on those rivers) down the Indus to Kurrachee, and there shipped for England. Kurrachee is a port of great importance; but, like many things of great importance, not heeded or taken advantage of. *The one article, cotton, if properly cultivated in the Punjaub and in Scindh, would afford export freight for a vast number of ships visiting Kurrachee, while Government stores for the Punjaub, private property and merchandise would afford endless import freight, to say nothing of the great number of passengers who would avail themselves of that route.*" According to a Scindh paper—"Any one located on the banks of the river Indus might observe fleets of boats coming down the river in the winter months, all laden with cotton." The cotton brought to Scindh and shipped at Sukkur comes across the Jaysulmere Desert from Rajpootana, and is either consumed in Scindh or exported to Affghanistan.—*Vide* "*Scinde Railway, and its Relations to the Euphrates Valley and other Routes to India.*" By W. P. Andrew. Allen & Co., Leadenhall Street.

Himalayan passes between Thibet and the Indian Plains will be stimulated by increasing and improving the means of conveyance, and much that now takes the long journey to Calcutta, will then find a shorter and cheaper journey to the sea by the Punjaub port of Kurrachee.

The last half-yearly report of the Sind Railway Company has shown that the Directors are prepared to undertake the construction of the line from Mooltan to Umritsur, so as to secure the whole of this enormous traffic for conveyance along the valley of the Indus, by means of a fleet of first-class steamers, and thence by their original line in lower Sindh, on to England. They have laid their proposals before the Court of Directors, and the result has been, as many already know in this province, that they have sent an excellent staff of engineers, who are now on the ground making the necessary survey, which, it is expected, will be completed during the present working season. The expenses of this preliminary survey, are, in the first instance, to be defrayed by the Court of Directors; and there is not a doubt but that the report sent in, will induce the East India Company to extend the guarantee of 5 per cent. to the capital that may be invested in the construction of this line, which will certainly have ultimately no superior in the advantages caused to the country it will traverse, and, probably, no superior in the profits gained for those who undertake it.

From the "Sindh Kossid," February 17, 1857.

The great pioneer of early communication with India, the late Mr. Waghorn, when he first submitted

his plans of overland communication, was, we believe, looked upon by some, as something approaching to insane; he nevertheless persisted in supporting and establishing his propositions, and the result has been a saving of time and money to the Government as well to the commercial public, as well as of conferring vast political and private benefits to both the Home and Indian Governments.

Still, with all these facts, these evident benefits to the world at large, we remain in a state of perfect inactiveness, which we positively cannot comprehend; and which, the interests of the countries which we govern, and the inhabitants over whom we rule, cannot possibly tolerate for a moment.

And, we contend that, if either the Home or Indian Government, have really at heart the benefit of the world, we may say, for in its objects and advantages, the subject cannot be confined to individuals, as in its workings it must bring the most important of our Indian possessions into closer proximity with the mother country, thereby connecting Sindh and our more lucrative possessions of the far North-West; a greater boon or more essential benefit, could not be conferred on the community than that of opening out immediately the line of communication proposed.

Cavalists may talk as they may, and pet subjects have pet objects to support them; but there is no questioning the fact, that Kurrachee must, in time, from its geographical position, be looked to as the key of India, in her connection with the mother country; and our immediate and easy intercommunication with our fertile and important provinces on the North-West will demand that it should be so.

When the monster meeting was held at Kurrachee some time back, under the auspices of Mr. Frere, we had hoped for great results from the speeches and promises then made; but, as usual, with our Indian Government, in matters of public utility and importance, "one thing or another" has interfered to prevent the working out of a feasible and publicly beneficial object, and matters have thus remained in their pristine state of ignorance and darkness.

We rely, however, fully on Mr. Frere's assurances to carry out with consistency and accuracy and determinedness, as is wont with him, the object he appeared to have at heart, that of establishing direct communication between England and Sindh, and the pamphlet now before us,* while we were fully assured of the necessity and feasibility before, the more firmly convince us, if such a thing could be possible, after we had already entertained an axiom, that the time for action—the time for bringing Sindh and the Punjaub into closer proximity with the mother country *has arrived*, and that the sooner we set sbout availing ourselves of its advantages, the more profitable will it be in all respects for the communities of Europe and India, *and the Euphrates line must appear to be the only one that can be availed of for this useful public purpose.*

Mr. Frere will, it is rumoured, now not remain much longer at home. His enquiries and researches, and the great interest he has evinced on the subject, will, we feel confident, work out materially for the benefit of Sindh and India. His favourite and most

* "The Euphrates Valley Railway and Indo-European Telegraph." Reprinted from "Bentley's Miscellany."

important subject at heart, we have heard to be the means of immediate communication between Sindh and England; and we look upon the Pamphlet now before us, evincing the objects, necessity, and feasibility of such communication, to be but as pioneers of his unceasing efforts, always directed towards public and individual beneficial objects.

From the "Bombay Gazette."

We cordially second the proposal of our Kurrachee friends for a weekly Mail communication between India and Europe; but the Euphrates route is clearly the line for them. It is a saving of eight hundred miles between Scinde and Malta; through one of the most fertile countries in the world; a part of the world, too, where it is most desirable that British influence should be felt by rulers, and favorably known among people. Every now and then, it is true, we hear of there being grave objections to the Euphrates route, sometimes they are geographical, sometimes political, but never insurmountable; and to our clever countrymen in Scinde we are sure the difficulties would be as nothing, if they took the thing in hand.

From the "Lahore Chronicle."

Capital is already beginning to accumulate in the Punjaub, both amongst the Europeans and natives, but especially among the latter. The trade of Umritsur

has doubled within the last seven years; the transactions of its merchants are gradually extending direct to Calcutta eastward, Delhi being formerly the seat of its eastern agencies, to Kurrachee and Bombay southward, and to the very heart of Central Asia westward and northward. The increasing facilities for the opening out of the trade with the hill regions and Affghanistan, have contributed largely to this desirable state of things, which owes its origin, however, to the general tranquility of the country. The piece goods of Manchester, and the cutlery of Sheffield and Birmingham, formerly imported even to Peshawur, *viâ* the Black Sea, Teheran, Musheed and Herat, now penetrate the recesses of Bokhara, Toorkistan, and Central Asia, on camels freighted from Kurrachee, Bombay, or Calcutta. Confidence in mercantile speculations is increasing in all quarters; new sources of trade are opening out in many directions, and, as we commenced by saying, capital is increasing, and still calls for a further outlet for new channels of employment, for further expansion of its uses.

ASTONISHING RESULTS OF IMPROVED COMMUNICATION.

Some thirty months since (in June, 1852) we submitted to our readers some articles advocating the construction of a railway between Lahore and Umritsur, showing the advantages that might result, and the profits that would accrue.

It was necessary to obtain a return of the traffic of all descriptions on the road, as it then existed, so as to have some tangible point from which to start on a calculation of returns. The season selected for this purpose was, it is true, not a favourable one. People do not travel so readily in the month of June

as they do in the month of November; but it was better to found the calculations on a minimum than a maximum average of travellers and traffic.

The following was, accordingly, the daily average obtained:—

100 horsemen; 2,000 foot-passengers; 80 camels (loaded); 117 carts (loaded); 169 ekas, or native one-horse conveyances, and 3 buggies.

We ventured, at the same time, on the expression of our belief that the construction of a railway, and the introduction of its low rates, for the conveyance of both passengers and goods would "have the effect of increasing the traffic to an extent of which we can at present form no idea."

That the opinion, as a general one, was well founded, has been demonstrated by the working of the sections of railway finished in Bombay and Bengal. That it would have been borne out had a railway been constructed between Lahore and Umritsur, is also placed beyond a doubt by the fact we submitted on Wednesday, in the census table of the traffic on the road between these two important towns. When our original calculation was made the communication was difficult, the road bad, and the traffic consequently small, and such only as the necessities of the people required.

See the change which a good and safe road, and its concomitant advantages, have brought about! For the 100 horsemen of June, 1852, we now read 535, besides 1,000 laden bullocks, with horses, mules, asses, (unladen), to the extent of some 1800. For the 2,000 foot-passengers we have nearly 3,000; for the 80 laden camels we have 243, with 89 unladen

ones; for the 117 carts, carrying goods or baggage, we read 195, while the ekas and bhilees (native one horse and two-bullock private carriages) have increased from 169 to 195, besides empty ones; every heading, in fact, showing an increase which will, no doubt, astound men inclined to be sceptical as to the immediate advantages of opening up new, and improving old, means of communication; erecting, in fact, a commercial activity that can only be nurtured by such means.

But our views go further. If the construction of a good pucca (metalled) road between Umritsur and Lahore has had the effect of more than doubling the traffic between these two towns, in the course of thirty months, what results might not be expected from the conversion of the present pucca into a railway? Is it not reasonable to argue that the returns might be calculated by a rule of three, which would show that if a good road had doubled the traffic, a better would quadruple it? The one is a fact, the other a theory, which an enlightened government might, and would very speedily apply for the benefit of the people, and its own peculiar profit. But after a railway between Umritsur and Lahore what? Why a continuation to Moultan, and the establishment of a communication between the three chief towns of the Punjaub, and an opening out of the trade of the country, the extent of which it would be as difficult to calculate as it would be impossible to overrate its importance.

TRAFFIC RETURN ON THE BRIDGE OF BOATS, RIVER RAVEE, AT LAHORE, FOR MARCH, 1856.

Coolies, laden . . .	24,372	7-bullock carts . .	408
Ditto unladen . .	9,479	Bhilees	123
Poneys, laden . . .	2,332	Ekas	180
Ditto unladen . .	1,615	Buggies	16
Bullocks	7,957	Ditto	3
Donkeys	3,087	Buths	2
Camels, laden . . .	4,957	Palkees	24
Ditto, unladen . .	597	Goats and Sheep . .	2,331
Horses, laden . . .	198	Cows	652
Ditto unladen . .	398	Buffaloes	237
2-bullock carts . .	1,867	Elephants	4
3 ditto ditto . .	371	Buffaloes	61
4 ditto ditto . .	1,451	Palkee Gharn . . .	1
5 ditto ditto . .	118	Guns (great) . . .	8
6 ditto ditto . .	5		

(*From the "Friend of India.*")

THE RAILWAY FROM UMRITSUR TO MOOLTAN.

No line more demands the earnest support of the Government of India. It would be the temporal artery of the Indian body. *From Meerut to the Soliman the true outlet for Northern India is to be sought in Kurrachee.* As to Calcutta, even the grand advantage of the Ganges, with its perpetual fulness and the cheapness of its traffic, is overbalanced by the distance. Bombay is twice as far; for, in India, a mile of land carriage is equal in difficulty and expense to at least ten of water. It is the habitual disregard of this great fact which at the present moment retards the progress of those provinces. No improvement can be made in cultivation, and no increase acquired for the revenue; for the granary bursting with wealth is locked up. The produce can find no market, and until it has found one, it is useless to extend production. The means proposed do not, it is true, give

these provinces a direct connection with Kurrachee. But they do surmount all the main difficulties in the way. Umritsur is already the grand *entrepôt* for the trade with Central Asia. The caravans which come down with spices and dried fruits, dyes and drugs, skins and carpets, chintzes and leather through Peshawur, Dhera Ismael Khan, and the Bolan Pass, deposit their loads at Umritsur. Wools and borax from Thibet, shawls and carpets from Cashmere, sugar and grain from the Doabs, all pass through this bonded warehouse of Northern India. The instant the line is constructed, it becomes the great outlet for the north-west also. The indigo which now travels painfully to Calcutta, and the wheat which rots in the granaries for want of means of conveyance, will find its way to the head of the railway. Lahore itself, though it is the fashion to contemn its trade, is still the seat of a wealthy population, and the centre of political action for 19,000,000 of human beings. From Mooltan to Hyderabad the road is open to steamers; and thence to Kurrachee the railway is in process of construction. The route, it is true, is imperfect, and the transhipment will be an addition to the cost of carriage. But it renders the steam communication between the Punjaub, Sindh, and the sea complete. From thence a new route to Europe is open to all the residents of the north-west. Mr. Frere has, we believe, organised his company, and every officer and soldier destined for the north-west will soon reach it by the direct route.

It is scarcely needful to point out that such a line must pay. Any line which connects a kingdom with the sea cannot fail to return a dividend. The Um-

ritsur and Mooltan line connects three, and its receipts must be proportionate. We are not, however, left to such conjectural arguments.

(*From the "Calcutta Englishman.*")

We have been furnished with some remarks on the subject of Punjaub railways, by a late overseer, who says:—that it will be advisable first to make a few general remarks, in such a manner that the facts and arguments which may be hereafter adduced in its favour, and to urge its immediate adoption, will come with the greater force. It is far from being extraordinary, that our views are usually bounded by the extent of our experience. I will admit for this term a wider acceptation than ordinary, that is, than mere practical knowledge and personal observation; for in it I include the information obtained from the perusal of books, periodicals, and newspapers, but more especially the last; both because of their very extensive circulation, and that most of our opinions, much of our knowledge, and all our information on passing events or projects, are based upon them.

It cannot be denied, that in this Presidency the largest amount of newspaper talent is concentrated at and in the vicinity of the metropolis, or say the province of Bengal. That there are hundreds of men of fine abilities scattered in the upper provinces and the Punjaub, is also a truism. Many circumstances militate against the employment of this talent, to furnish valuable contributions to papers of influence; and few like to waste it on the columns of a provincial newspaper. Therefore, in general, they little think, and still less care for it. Secondly, the great distance from Calcutta, and extreme probability of

failure for packets of importance in reaching their destination; and, lastly, the lack of that peculiar tact which enables the trained contributor to write long, and write well. It is not, then, surprising to find the subject of our railways discussed solely in Calcutta and Serampore, and this generally with reference to Bengal probabilities and prospects only; because few, if any, of the writers have been beyond its limits. What strongly confirms this statement, is the scheme in contemplation for an eastern railway to Dacca, which, though a large, prosperous town, is not yet by any means entitled to an expensive railway. Expensive it undoubtedly will be, when it is considered that the intermediate country between it and Calcutta is a series of nullahs, rivers, and low grounds, requiring high embankments and large bridges.

As regards the trunk line (the East Indian), if we examine the principle which has hitherto guided the process of construction, *we shall find certain errors of omission, caused by the very nature of its Direction, composed, both in England and India, principally of men totally unacquainted with the country or language;* and this remark applies equally to the subordinate branch, from the district-engineer down to the inspector and plate-layer. I shall have some observations to make on this head before concluding.

In mooting the question of a railway, the great objects to be established are, firstly, its practicability; and, secondly, its remunerative character. Instead of proceeding by successive instalments from Calcutta towards the north-west, operations might, with advantage, have been commenced to connect various important points, at nearly the same time, with the

Calcutta and Raneegunge line. Had this been done, and proper arrangements made, railways between Allahabad, Cawnpore, Agra, and Delhi would, long ere this, have been finished, and the traffic in full progress. There are few, if any, engineering difficulties to be encountered on the total length of about 300 miles; and these stations being termini, each separate portion might have been independently surveyed and constructed. The Jumna bridges need not have been a drawback; for Allahabad being at one extremity, and a pontoon bridge being permanently established across the river at Agra, there would be scarcely any detention or delay along the whole route. The country throughout is pretty level, or with inclinations so gradual, that the earthworks are comparatively light, and *kunkur* or ballasting is to be had in abundance in those parts which closely border upon both sides of the line.

I shall now slightly sketch these lines, to show how quickly they should have been completed, and the positive loss resulting from these *errors of omission.* Allahabad is well known as the terminus of the Ganges' steam navigation; it is therefore the depôt for goods destined to the Upper Provinces, and the debouchure for a considerable portion of up-country produce. Every kind of English or Calcutta manufactured railway stock, such as rails, engines, carriages, etc., could easily be transported thither. From Allahabad to Cawnpore, 125 miles, it is almost an unbroken level, intersected by two small nullahs at Lohunga and the Paundoo Nuddy. At about 76 miles of this distance, is the large town and civil station of Futtehpore. Another line ought to have begun the moment the country fell into our hands—

I mean, a railway from Cawnpore to Lucknow; though there has been some talk of it, yet nothing has been done. That on this 48 miles, eight horse-carriage daks, belonging to different proprietors, are now running, proves at once that *this* railway would pay well. I have instanced the most expensive mode of travelling, without taking into account the hundreds of ekas and other native vehicles employed on this road; and since Oude has become a British province, the traffic has wonderfully increased.

Between Cawnpore and Agra, the railway is divided into three parts: to Etawah, 40 miles; to Shekoabad, 100 miles; and to Agra, 36 miles. Here, also, is a level country, without a single river to cross, and but few nullahs to bridge. Again, from Agra to Delhi, 132 miles, towards the very large town of Muttra, 33 miles, the ground, certainly, is rather broken; but, beyond, it becomes tolerably level. In the whole length to Allahabad are many well-sized towns and villages adjacent to the road; and Allahabad, Cawnpore, Agra, and Delhi, being upon the river Ganges or the Jumna, an uninterrupted water-carriage, for large boats at least, is available up to Delhi.

It cannot be argued, that because time *alone* has in some measure remedied the omissions I have pointed out, there can now be no necessity for recurring to them; certainly, the lines are now progressing—that is, the line from Allahabad to Cawnpore will be completed in fifteen months, to Agra in two years, and to Delhi in about three years hence; the Jumna bridges may be safely reckoned at seven years. *So much for a system by which an immense capital is so long rendered utterly profitless;* whereas method,

judgment, and *experience* would have made such a considerable sum actively remunerative. It is not simply with a view to make useless comments, that I have premised these remarks; but that this experience should make us wise, so as to avoid the repetition of former errors, and profit by the wisdom thus dearly purchased.

It seems to me unaccountable, that among the projects for branch railways, extensions, etc., so frequently brought before and urged on the public, no attention should be drawn to a country whose peculiar capabilities and resources will soon render it one of our finest possessions; in addition to which, it is our northern frontier province. I wish, therefore, to bring prominently into notice a line of railway which, if constructed, would soon become the most important in India, either for pecuniary or commercial prospects; for I am certain it would pay the largest dividend, in comparison with any similar length, of all the other railways in the country.

Lahore, situated on the Ravee, is the capital of the Punjaub, and the seat of its political administration. The town is very extensive, and carries on a brisk internal trade; the civil station of Anarkullee, and the large military station of Meean Meer, are likewise attached to it. Umritsur, the commercial capital of the Punjaub, distant thirty-six miles, is at least equal, if not superior, to Delhi in population and wealth.

The intervening country is level, and without even a nullah of any size; and an intercourse of so great an extent is maintained between them, that the road is literally thronged day and night with every description of wheeled vehicle, horses, camels, etc., and

foot-passengers; in short, more resembling the street of a town than a mere communication between two cities so far apart.

Umritsur is the grand entrepot for the commerce of the Cis-Sutlej States — the rich and mountainous region eastward to Kote Kangra — the horses, fruits, and woollens of Cabul and Bokhara; the shawls and other produce of Cashmere, Yarkhand, and the mountainous country towards the north-east, in fact, of the whole Punjaub, and the countries encircling it, are here concentrated.

Mooltan is a large town and military station on the Sutlej or Gharra, so termed after its junction with the Beas. It is quickly becoming an important emporium, for it is the connecting link to the trade of Northern with South-Western India, or rather Bombay and Europe.

Kurrachee, situated at the mouth of the Indus, is fast advancing in prosperity, and into notice as a seaport; it will probably soon be known as the first in the empire, being superior to Calcutta, Madras, or even Bombay. In a commodious harbour and safe anchorage, it will become a depôt for the commerce (export and import) of all Northern India and Sindh with Europe. The railway now in progress of construction between Kurrachee and Hyderabad, some two hundred miles higher up the river, will tend to promote its importance, as, during the monsoon months, the navigation is highly dangerous and totally at a stand-still between these two ports.

Now the formation of a railway from Umritsur to Lahore in the first place is advisable, and will pay magnificent dividends, with a small comparative outlay, particularly in the cold season. The few facts I

have above stated prove this, as also the circumstance of the present being the time when the influx of horse-dealers and other traders from Cabul, Bokhara, Cashmere, Yarkhand, Thibet, etc., is very great. My position some two years ago enables me to speak with confidence upon this point. One instance will suffice. The new floating-boat bridge over the rapid Chenab river was completed and thrown open on the 7th November, 1854, and all arrangements for repairs, collection of the tolls, etc , in proper train. At midday, the bridge was always closed for the purpose of opening out the raft-boats to allow of merchant-boats, timber-rafts, etc., to pass through. At 2, P.M., the bridge was again opened. During these two hours, the superintendent was generally present, to provide against any accidents, and often amused himself by strolling among the waiting crowds on both sides, but more frequently at the northern bank, where there were multitudes of camels, mules, tattoos, and hackeries, laden with the produce and manufactures of the North. On inquiring their destination, the invariable reply was, Umritsur, Lahore, or Delhi, but by far the greater number for the first named city. At first sight, it would appear almost impossible for any floating-bridge to sustain the immense load borne by it in a minute after the passage was again opened for land traffic. The tolls, which, instead of farming out as usual, Government took into its own hands, exceeded the most sanguine expectations, and this under the corrupt management of a parcel of Moonshees and Darogahs. Undoubtedly, the cause of such an advance must be attributed to the unexampled facility of transport afforded by the great Lahore and Peshawur road, which, though yet

unfinished, is immeasurably superior to anything of the kind formerly known, particularly in the hills and ravines beyond Jhelum.

Admitting that the railway from Umritsur to Lahore is absolutely necessary, I shall try to show why an extension to Mooltan is likewise requisite, and must prove profitable. From Lahore to Mooltan is about two hundred miles; the intermediate country, lying in the valley of the Sutlej, is generally low and sufficiently level, the average fall being about 2½ feet per mile. In 1850-51, the trial levels between Loodiana and Ferozepore (higher up the river), averaged a fall of 2⅗ feet per mile, or 1 in 2,000 feet. The geological features of the intervening district between Lahore and Mooltan are alluvial or firm sandy soil, interspersed with high grass or low bush jungle. The military metalled road was, I believe, one of the first in the Punjaub, and is a proof that no extraordinary difficulties require to be surmounted, as it is a melancholy truth, that a Government public work in India, at all difficult or expensive, cannot by any means compete with private enterprise; but, what with the red tape and occasional stoppage of funds, the old adage in the long run is exemplified, "Penny wise and pound foolish." I have, therefore, indirectly proved, that there must be fewer obstructions on this line than on any other, and shall now proceed to show why this line should yield a certain profit.

By the judicious, public spirited, and energetic exertions of Sir John Lawrence, and many other civil servants attached to the Punjaub, the extensive culture of flax, linseed, and other valuable agricultural produce, is warmly encouraged in the rich districts watered by the Sutlej, Beas, Rayee, and Chenab rivers. These

products are principally designed for exportation, as scarcely any are consumed by the inhabitants; but the foreign demand is yearly increasing. To create a spirit of emulation, Government in 1853 and 1854 undertook the purchase of all the new crops raised; and in 1855, an association of capitalists, I am informed, bought them up. What may have been arranged for the present year, I am unable to judge, but imagine that the trade is fully established, and will increase of itself.

The Punjaub contains more than a third of the military force of this presidency (Bengal). Vast supplies of stores of various kinds, ammunition, beer, etc., for troops, are constantly forwarded, and their carriage is only accomplished by a slow, expensive, and circuitous route from Calcutta, or the equally tedious and dangerous up-river boat voyage, viâ Kurrachee and Mooltan. By a late regulation, recruits and stores destined for the provinces northward of Meerut, and invalids going home take the Sutlej and the Indus route to Bombay. Fully two months are spent in proceeding from Ferozepore or Lahore before they can be embarked on steam or sailing vessels at Kurrachee; of course, in coming from it (Kurrachee) against stream must consequently be longer in proportion. In conjunction with the Sindh railway from Kurrachee to Hyderabad, and steam navigation from the latter to Mooltan, which at all periods of the year is safe and practicable, the railway from Umritsur to Mooltan will be perhaps the most profitable line in British India. The rivers Beas, Sutlej, Ravee, Chenab, and Jhelum, being united just below Mooltan into one splendid river called the Nilab.

At present, excepting those gentlemen who can

well afford to pay for palkee dak, and wait for the half-monthly steamer, all travellers and consignments proceeding to or from Bombay or Europe, must toil through the tedious and hazardous river navigation before alluded to, in rude country boats, liable at any moment to be stranded or upset. The Bengalee or Hindostanee manjees are sufficiently unskilful, but they are men of science and dexterity compared to the Punjabees; yet, for want of a better and cheaper means of transit, most of the mercantile and other supplies, as well as passengers, destined for the Punjaub or cis-Sutlej States, take this route. The chances are risked to avoid the enormous expenses of a land carriage, comprising from twelve to fifteen hundred miles, via Calcutta; which, for goods, is equally as dangerous as the Indus and Sutlej passage, from the positive certainty of loss or damage occasioned by exposure to every vicissitude of the weather during four or five months; to say nothing of bad roads, and the usual careless indifference of hackery drivers and peons, or other pseudo guards; besides, having to pass through the thieving district lying between Kurnaul and Loodiana, in which the Trunk road will will not be finished for two years at least, if even then; the works being very likely stopped for want of funds to carry them on, Government was thus compelled to deal with the Punjaub.

It must not for a moment be supposed, that the districts between Umritsur, Lahore, and Mooltan, are merely level wastes; the country, from Umritsur to Lahore is cultivated like a garden; many very large villages are seen along the road. The country from Lahore to Mooltan is also in general well cultivated. Nearly midway is the large town and civil station of

Gogaira, forty-eight miles south of Lahore; and on the left bank of the Sutlej is the military station of Ferozepore. Farther west, on both sides of the river and of the road, are Mairnkote and other populous towns and villages, all of which may be expected to take advantage of the railway. I have seen gentlemen from Ferozepore, Lahore, Umritsur, Jullunder, Loodiana, and even as low down as Umballah, wishing to travel rapidly to Mooltan for the steamer, compelled, at great cost and inconvenience, to go by the mail cart, with only twenty pounds of luggage allowed. None that have not personally tested this mode of travelling, can form the slightest idea what it is like. Take the hood, springs, part of the back and sides off an old buggy, and whirl along on it, at ten miles an hour through rough or smooth, for two or three hundred miles, and only stopping for change of horses — then you have some notion of mail cart travelling.

Conceding that the above railways will prove highly advantageous, both in a public and commercial sense, let us now see the effect of throwing forward a north line, with Lahore for a starting point. To Wuzzeerabad, or rather to the Pulkhoo nullah on its northern boundary, is 59 miles. A bridge across the Ravee is not immediately necessary, as the floating bridges to all the Punjaub rivers are intended to be permanent, on the line of new road to Peshawur. Two stations, therefore, one at Lahore for the Umritsur and Mooltan Railway, and the other on the right or north bank of the river for the Northern Railway, will for some time sufficiently answer every purpose.

For this new line, I shall be guided by the Trunk

road to Peshawur, to which it will be supposed to run generally parallel; the principal and only real obstruction, is the Baugbuchha nullah, a rapid stream during the rains, but peculiarly adapted for a railway bridge, from the extraordinary depth to which the water has cut away the subsoil; the stream, consequently, is confined, and the banks far above highest flood level, and about 130 feet in width. At 32 miles from the Ravee, we come opposite the large town of Eminabad, 3½ miles wide of the road eastward; at 40 miles the road runs through the civil station, and very extensive trading town of Goorjranwala, and 18 miles further forward, we arrive at Wuzzeerabad. West of this point 6 miles, and eastward 21 miles, are the stations of Wuzzeerabad and Sealkote, holding more than 6,000 troops, and the latter a Deputy Commissionership. In those 60 miles, I could mention other large towns near to, or not much distant from, the road; and it should be likewise known that the Deputy Commissioners in the Punjaub, without exception, have most laudably exerted themselves for local works, by opening kutcha, but wide, well-bridged, and side-drained roads between towns, or to a main line which, from Lahore to Peshawur, having been carefully and judiciously selected, will prove the best for a railway; that is, by proceeding as closely as possible to it on the east or west side. In 1855, a bridge, on good foundations, was in progress for the Pulkhoo nullah, a branch or offshoot of the Chenab, on the north of Wuzzeerabad; but probably it is stopped with all other works.

From the city to the river is two miles, regularly flooded every season throughout. With the greatest difficulty Lieut. A. Taylor, superintendent of the

whole road, has managed, by means of high embankments, spurs, and sheet piling, to make a continuation of it to the Chenab left bank. The difficulty does not consist in the height of embankments or cost of sheet piling, but the trouble and expense of procuring a sufficiency of earth near at hand for the formation level; this tract being composed of a thin crust of alluvial deposit, varying from six inches to two feet in depth, under which is an indefinite stratum of pure river sand. I have seen this crust sliced off for earthworks to a distance of 1,400 feet from the road; yet the cost of it did not, for these two miles, average more than the rates given to contractors on the E. I. Railway. The bullies (fir posts) for piling are also only 8 rupees or less per score, each from 4½ to 7 inches diameter, and 13 or 14 feet long. South-west, lower down about sixty or seventy miles, the Jhelum and Ravee both fall into the Chenab, and by this river is rafted all the deodar timber (Cedrus Deodara), the principal wood used in the Punjaub, and even down to Mooltan, Hyderabad, and Kurrachee. It is obtained from the splendid forests on the great Peer Punjab mountains in the Chumba, and other petty rajas' territories bordering on Jummoo and Cashmere. Submerged in water, this wood will last an incredible time; there is an instance, in the latter country, where it has so stood for 500 years. At Wuzzeerabad the price of deodar logs is, up to 25 feet length, 3 tussoos per rupee; beyond 25 feet, 2½ tussoos;—this was the contract rate to an Armenian timber merchant, Mr. Arratoon, but for shorter lengths 4 or 4½ tussoos may be got from natives, or by a properly regulated system of obtaining the wood direct. The tussoo is a Punjabee measure, 3 cubic

feet being equivalent to 3½ tussoos, or 1 tussoo is very nearly equal to ·857 of a cubic foot. Sawyers' work at Wuzzeerabad is from 90 to 96 superficial feet per rupee; carpenters, masons, and blacksmiths in the Punjaub are at 4 annas per day.

I have been thus particular in details, because, if from these statements commercial enterprise be induced to form a company for the construction of Punjaub railways,* it will be known how, where, and at what cost, sleepers can be made to any amount, and conveyed by land to Lahore, by water to Mooltan, or up the Sutlej. Commanders and owners of vessels at Kurrachee, and even Bombay, are extremely anxious to get this wood for decks or other interior work, on account of its lightness and durability.

In India a railway becomes, from other causes, an undertaking requiring as much anxious forethought and provision against accidents as a main line in England. There, after the primary questions are satisfactorily resolved, remains the land, law, and parliamentary entanglements to work through, before anything tangible is done. Here, these difficulties are simplified, because the consent of Government and its guarantee once obtained, the rest follows as a matter of course, from the constitution of our *imperium in imperio.* In the United Kingdom, coal is everywhere abundant; in India it was not till recently worth discovering; now, however, carboniferous deposits are eagerly sought through districts where railways are now constructing, or may be expected to pass; and, accordingly, as these researches

* A Company, for the introduction of Railways into the Punjaub, has been formed in London.

prove more or less successful, will be influenced the working expenses, and, consequently, the percentage of dividends. In addition, therefore, to establishing the first vital essentials for a railway, we must in India take fuel (coal) as another ingredient of equal value. This article throughout the European and North American continents is so plentiful, that it scarcely ever enters as a modifying element into the calculations and statements of a new railway prospectus.

Geologists have asserted, that the plains of Upper India are destitute of coal formations. We must, then, ascertain beforehand, the sources from whence the demand for this mineral can be supplied. In advocating the northern line from Lahore, this consideration is one of the chief objects I have in view, beyond merely solving the questions of practicability, cheapness, and extent of traffic; the latter at all periods of the year, but especially during the cold season, is very considerable; and the two former I have also shown as peculiarly favourable for a railway.

From Wuzzeerabad to Shahpoor, and the coal and salt mines of the salt range in its vicinity, is roughly estimated at 70 or 80 miles; the celebrated Punjaub salt being here quarried and used in preference to any other, wherever it can be obtained at a moderate price. Were its price double that of the common salt in Calcutta, none of the latter would be used. Why this article is so esteemed in India, must be attributed to its purity and the supposed presence of some magnesia and oxide of iron; doubtless owing to these foreign bodies it is, that the salt is said to have tonic or alterative properties.

It is quarried in great solid blocks, and conveyed by camels throughout the country, and even beyond the Hindoo Koosh mountains. No refining process is required—the lumps merely require to be washed, dried, and pounded or ground into powder, when it appears white as the driven snow. I have no hesitation in asserting, that this article would alone form an important branch of railway traffic, and prove also profitable to Government.

In the valleys and mountain ranges east and north-east of the great Lahore and Peshawur road, it was reported to me, by natives of those regions, that metallic ores were in abundance—such as iron, copper, lead, silver, and gold in the sands of some streams. The Armenian timber-merchant, Mr. Arratoon, informed me, in December, 1854, that he had discovered the existence of immense coal strata, during his annual excursions to these mountains, for the purpose of cutting timber from the deodar forests I have mentioned. He stated having forwarded specimens of this coal to Mr. H. Cope, at Lahore, where it was pronounced to be of the finest quality. Some of the deposits were laid bare by the action of mountain torrents, which sometimes cut away the rock and soil to a great depth. Mr. Arratoon naturally wished to keep the secret of the locality to himself, until he could secure such terms of agreement with the sovereign of the district, as would ensure to him the belief that the opening and working of these coal-mines would be a safe and profitable speculation.

Maharaja Goolab Singh, of Jummoo and Cashmere, in whose territories it was found, and to whom proposals were made by Mr. Arratoon, crushed the

enterprising spirit of this man by his grasping and avaricious disposition. He was positively offered 25 per cent. on profits, but will not be satisfied with anything under 50 per cent., and this without being at all comprised in the risk, outlay, trouble, or establishments. No man could attempt the enterprise on such conditions, and with such a landlord as Maharaja Goolab Singh, who, on finding a coal scheme profitable, would soon find means to obstruct its working, and ruin the merchant or company, when he would try to monopolise the whole coal trade and profits.

In a country like the Punjaub, I have no doubt that, under a good geological survey, not only coal, but the metals I have enumerated, could be discovered in quantity and extent exceeding expectation. Kunkur deposits become more rare and full. Two-thirds of the country are hilly or mountainous. What may be the reasons for making such a statement I cannot say; but the fact is said to be proved, that no coal or metalliferous formations are ever to be found in the locality or vicinity of Kunkur deposits. This sweeping dictum will at once exclude the great plain extending from Benares to Lahore; though in hilly districts wide of the road, such as Chunar and Rajmahal, coal strata are known to exist. We may, therefore, reasoning from analogy, safely predict the mineral resources of the Punjaub to be developed whenever the demands of commerce and prospects of wealth arouse the sluggish spirit of Indian enterprise; and twenty years hence will perhaps see the Punjaub elevated into the most important province in India; its variety of climate and soil still further tending to increase its capabilities for agricultural, mineral, or

metallic products: and were facility of transport by railways on land, and steam navigation on the great future commercial artery, the Indus, once in proper operation, Government in revenue, the railway in profits, and the country generally in wealth, population and rapid advancement would soon be the visible results.

Again the geographical configuration of the Punjaub, the general course of its rivers, or, properly, its lines of drainage, the sources from whence the linseed, flax, tea, wood, coal, salt, and iron, etc., are derived, suggests a most unique idea. Both the deodar timber and the coal spoken of are contained in mountainous regions bounding Jummoo and Cashmere in the valleys of the Chenab and Jhelum. The trees are felled and thrown down either into the rivers or their tributaries, and caught up at the depôts eastward of Jummoo and our station of Sealkote, at Uknoor, where the Chenab emerges from the mountains. It is about 40 miles from Sealkote and 60 from Wuzzeerabad.

There are, perhaps, timber depôts higher up, but I have not seen them. At Kooloowal, on the Chenab, between Sealkote and Wuzzeerabad, is the depôt where all the stray logs are collected.

Here now we have an opportunity of verifying the old proverb "killing two birds with one stone." From these depôts, the deodar logs are rafted down to Wuzzeerabad, Jhung, Mooltan, and Kurrachee, by the Chenab, and by the Jhelum down to Jhelum and other places, until the river falls into the Chenab.

Now the deodar wood having but a low specific gravity, could convey, on nicely-constructed rafts, a

large portion of coal, salt, etc., with little trouble, and no expense of carriage, the value of the wood more than paying the cost of loading and landing. Below Uknoor, and down to Hyderabad, there is never any cause of danger to these rafts, and with well-trained men and good supervision we may be able to commence this water carriage much higher up the river.

That the conveyance by land to these upper depôts cannot be insuperably difficult or even moderately so, we can judge by the fact of the cautious and astute Mr. Arratoon being so anxious to undertake the coal speculation; and I am *certain* this rafting idea never struck him.

From the Madras Athenæum.

We are satisfied that the desire to secure *the shortest route to India will be revived in full force, and that eventually we shall penetrate through Asia Minor to the Persian Gulf, so as to make that mighty river once more, as in ancient times, a highway to the commerce of the East.* It is, indeed, far more probable that this generation will not pass away before a railway is perfected, so as to unite the Euphrates at some accessible point with the Mediterranean, and thereby shorten and render still more easy the overland communication with the East, through the Persian Gulf.

From the Sindhian, February 14, 1857.

Of all the lines of railway already made in this country, or projected, we know of none that present

a more eligible investment for capital than those proposed for Sindh and the Punjaub. In point of construction they will certainly rank amongst the cheapest. The country through which they will pass is most favourable for railway works, and throughout the whole extent there will be fewer physical obstacles to overcome than in any other line in Hindostan. All the plant, rolling stock, and other material, can be conveyed to the spot, as it were, at the lowest cost, owing to the accessibility of our port to vessels direct from England, and the advantages which we enjoy in the almost uninterrupted navigation of the Indus. The immense trade already in existence in these territories, and the certainty that increased and improved facilities for transit will develop it to an incalculable extent, warrant the assumption that the returns will exceed the most sanguine expectations of the shareholders. *And when we take, in connection with these, the magnificent scheme for bringing this province into direct communication with the Persian Gulf and Europe, we think we may safely affirm that the whole undertaking is one of the safest commercial enterprises that has yet been projected throughout India.*

As a cognate matter, we may notice here the gratifying intelligence that has reached by this mail about the Euphrates Valley Railway. The directors of that line have been informed by electric telegraph, that the land required for its construction has been ceded by the Sultan, and that a guarantee of 6 per cent. has been agreed to by the Turkish Council of Ministers on the 5th proximo. There is no longer, therefore, anything to fear about its immediate con-

struction, which will be proceeded with without any loss of time. The Steam Boat Company, for completing the communication between India and England, will speedily be brought into existence, and it is not improbable that it will be in active operation even before the railway is finished.

Digest of Official Reports of Trade of Syria and Mesopotamia.

A new series of reports on the trade of various places from English Ministers, Consuls, and others has just been issued by the Board of Trade. Those which relate to Turkey are from Aleppo and Broussa, and, as the projected Euphrates Railway is to pass the former city in its route of eighty miles* from the Mediterranean to the river, the facts in connexion with the commerce of that district are likely to attract much attention. The progress of the place during the last five years, and the magnitude of its capacities appear to be extraordinary. As far back as 1851, according to statements from Mr. Acting-Consul Barker, there were signs of a considerable development of trade, and the tendency was rapidly stimulated by the war. In imports, British manufactured goods amount in quantity to about two-thirds of the whole trade of Aleppo. In value they are about one third. Five years back this value was £146,405. Last year it was estimated at £471,353, exclusive of specie, which has been largely absorbed in the interior of Mesopotamia. As regards exports, the return for 1854 shows a total of £993,630, which has risen in 1855, to £1,254,130, of which about

* 150 miles, according to recent survey by Major-General Chesney and Sir John Macniell.

£450,000 consisted of wheat flour and grain, while cotton and wool were also important items. The export trade in grain has been encouraged by the high prices prevalent in Europe since 1851, and in a still greater measure by the demand for the allied armies at Constantinople.

In relation to the capacity of the country to pour forth continued supplies, it is stated that nothing is wanted but effective means of transport to the coast to enable the whole of Mesopotamia to furnish incalculable quantities at prices below those of the ports in the Black Sea. At the end of March last, more than 50,000 quarters, belonging to different purchasers, were remaining in store to the east of the Euphrates, while there were still above 100,000 quarters for sale, and which were not taken, owing to the want of means of transport to the Mediterranean. Last year the rate of carriage from Aleppo to Alexandretta (one of the Mediterranean ports open for selection for the terminus of the Euphrates Railway) averaged £1 2*s.* 5*d.* per quarter for wheat, and £5 per ton for goods, while the price of wheat in Aleppo was only from 25*s.* to 30*s.* per quarter, and of barley 11*s.* to 14*s.* Several years back, as soon as the demand for Europe admitted of exports being made at a profit even in the face of these enormous charges for land-carriage, the Turkish government removed the restriction which had previously existed. 'Before a year had elapsed,' says Mr. Baker, 'hundreds of animals, camels, horses and asses were seen day and night conveying grain to the coast, pursuant to contract. The succeeding year a still greater number were engaged in this business,

and there is no doubt, were roads made, that the agriculture of the whole of the interior would increase so rapidly that the produce would be sold at very remunerating prices.

It is further pointed out that there are now no trading restrictions to interfere with this state of affairs; that Alexandretta is practically a free port; that Aleppo is the emporium of the whole of Mesopotamia, Bagdad, Persia, and the south of Arabia, and the link of communication between those countries and the Mediterranean; and that the only things requisite to develope the capabilities thus presented are carriage roads, railways, or tramways to the coast, and a reform of the Turkish currency, which tends to embarrass every transaction, especially those depending on a system of contracts. *When it is considered that the proposed Euphrates Railway will not only supply all the facilities demanded, but is to shorten the journey to India by almost one-half, the changes impending in the destinies of this region, the early prospect of which is one among the salutary results of the war, will appear to claim greater attention, commercially and politically, than any at present to be looked for in other quarters of the Globe.*

"*Times*," *City Article*, 14*th Oct.*, 1856.

Last Report of Punjaub Government on Railways.
(*Extract*).

So far as the commercial and material interests of the Punjaub are concerned, there is a proposed line from the North-East to South-West, which is of greater consequence to the country than any public

work, or any number of works that could be specified. A glance at the accompanying rough Sketch Map will show that Northern India has two natural divisions—*first*, the Provinces of the Ganges and its tributaries; *second*, the Provinces of the Indus and its tributaries. In the first or Easterly division, the stream of trade and wealth must ever flow down the valley of the Ganges to the natural outlet of Calcutta. In the second or Westerly division, if the power of Art and Science be brought to the aid of nature, the commerce could follow the direction of the Punjaub rivers to the Indus, then down the valley of the Indus towards the rising port of Kurrachee, which is destined to be, to the Nort-West of India, what Calcutta is to the North-East. *A line drawn North to South, somewhere near Agra and Delhi, will form the probable boundary of the two natural sub-divisions. And if the same facilities were created Westward, which exist Eastward, then all the commerce West of the line would follow the Indus to Kurrachee, in the same manner as the commerce on the east follows the Ganges to Calcutta.* At present, however, the major part of the commerce of the extreme north-west travels eastward, merely from the want of a more direct route. But if the great route of the Indus were to be thoroughly opened, this commerce would go straight to Kurrachee. To this port there would then come the products from the North-Western India, and from the Central Asian countries beyond that frontier; and in exchange for these, the products of European countries. In this same direction, there would also arrive the vast quantities of Government stores and material

for the Military and Public Establishments in that quarter, and large number of European travellers would frequent this line (in preference to the Eastern route), on account of its comparative shortness and proximity to overland passage to Europe.

For the opening up of this Western route, the importance of which, upon general considerations, is so evident, it is proposed, in the first place, to establish communication by rail and steam from Kurrachee upwards to Mooltan (a distance of 425* miles), just above the point where the Punjaub rivers join the Indus. For the first section of this line a railroad from Kurrachee to Hyderabad on the Indus, a distance of 123 miles, has been undertaken by the Sindh Railway Company. At first, the line may be continued thence up to Mooltan, by steamers on the Indus, to be followed by a railway as soon as it can be constructed; there would then remain to be constructed a railroad from Mooltan to Lahore and Umritsur, to join or cross (or rather continue) the great North-Western line between Calcutta and Peshawur. It is this last named railroad, from Mooltan to Lahore and Umritsur, which immediately concerns the Punjaub; and the Supreme Government have directed complete inquiries on the subject to be made. It will now be proper to state briefly what the advantages and facilities of the line are likely to be.

The Northern terminus of the line will be Umritsur, which is not only the first mart in the Punjaub, but also one of the first commercial cities in Upper India. Its merchants have dealings, not only with all parts of India, but also with many parts of Europe

* By rail and river, above 600 miles.

on the one hand, and of Central Asia on the other. To this city there come the choicest Asiatic products, the wool of Thibet, the shawls of Cashmere, the dried fruit and spices of Affghanistan, the carpets of Turkey, the silk of Bokhara, the furs and skins of Tartary, the chintzes and leather of Russia. In return for these arrive the piece goods and iron of Europe, the fabrics of Bengal, the sugar of Hindoostan and the Punjaub. To the same emporium are gathered all kinds of indigenous produce of the Punjaub. Of this trade, amounting, according to reliable returns, to three and a half million pounds sterling per annum, a large portion proceeds to and from Calcutta, by the Grand Trunk line; another portion to Bombay by difficult and laborious land routes, through Central India and the desert routes of Rajpootana; and a third portion (and at present the least portion) to Kurrachee, by water carriage on the Indus and its tributaries. *Of this traffic, then, nearly all would be diverted to the proposed railroad from Umritsur to Mooltan, and thence to Kurrachee. From these parts most things intended for export would not go to Calcutta, if there were facilities for going to Kurrachee; and of those things destined for Bombay, all would go by the rail to Kurrachee viâ Mooltan, instead of the arduous route through Central India. In the same manner all the imports for Umritsur, and other parts of the country between Delhi to the North-western Provinces Frontier, and the regions beyond it which now come from Calcutta or from Bombay by land, would proceed to Kurrachee and thence upwards by rail.*

But besides the noble traffic above indicated, which of general as well as local interest, there is already a traffic of some magnitude between the

Punjaub and Kurrachee. *So strong is the tendency of trade towards the natural port and outlet, that large quantities of indigenous produce creep and labor in clumsy native craft down the Five Rivers.* In this manner, hundreds of tons of cereals, linseed, sugar, saltpetre, indigo, pursue a tedious way over 400 miles of the five rivers to the seaboard. The water traffic is greatest on the Sutlej, next on the Jhelum, then on the Indus, and lastly on the Chenab and the Ravee. The united traffic of the rivers up and down by (the greater part, say four-fifths, being *down* traffic), as ascertained by registration of boats at the junction point, Mithun Kote, on the Indus, is not less than 700,000 maunds, or 35,000 tons per annum. Now if the rates of carriage by rail should be kept low, so as to attract commodities which can only afford to pay for *cheap* transit, then it may be certainly presumed, that of the above quantity *all that pertains to the Sutlej, the Ravee, and the Chenab, and a part of that belonging to the Jhelum, will be diverted to the Umritsur and Mooltan Railway; and if the Railway up to Peshawur should have been established, then almost all the traffic of the Jhelum, and much of the Indus traffic would proceed to Lahore, and thence down the Rail to Mooltan.* The present means of navigation being wretched, and the rivers being difficult, the existing water traffic would preferentially take the Railway, *provided always that the cost of transit be cheap.* It is, indeed, for the sake of this indigenous traffic that every well-wisher of the Punjaub people must be anxious to see the day when the Rail shall be opened from Umritsur to Mooltan. The traffic may be already considerable and promising, but *it is now as nothing* compared to *what it would*

become, with the advantages of a Rail. In the Chapter on Land Revenue, the enormous and increasing production of cereals beyond the present consumption, the probable *surplus* produce amounting to a quarter, perhaps half a million of tons annually, the quantity of unreclaimed land capable of production, the great productive power of the people, were demonstrated. Wheat of excellent quality is grown, and this is eminently a corn-producing province. Sugar-cane of first-rate quality is already grown. Indigo of similar quality can be produced; it is already exported to a considerable extent, though at present of inferior quality, owing to the defective mode of manufacture. It has been recently proved that good linseed in considerable quantities can be raised. If sufficient pains be taken many hundred tons of fibre can be prepared. From some parts good hemp could be exported. From many thousand square miles, the saline nature of the soil offers unusual facilities for the manufacture of saltpetre, which is even now largely made to meet a foreign demand; and from the same soil, carbonate of soda could be profitably made. The numerous flocks of sheep in the extensive pasturage of the central districts, and in the hills and valleys of the North, yield a wool that is already exported, and which might become an export of magnitude. There are various articles of manufacture fit for exportation, such as the shawls, stuffs, silks, and carpets of Umritsur, Lahore, Mooltan, Noorpore, and Loodhiana. It were vain to specify the amount which *might* be exported by the rail, but none acquainted with the Punjaub could doubt that the aggregate would be enormous. Lastly, independently of European travellers, who would be nu-

merous, the number of native passengers would prove most profitable. Between the cities of Lahore and Umritsur, the transit of passengers has greatly increased since the completion of the new road; the average of travellers to and fro is not less than a thousand persons per diem; and whereas six years ago there were not twenty ekkas (small one-horse vehicles carrying two or three persons) in Lahore, there are now some 250 running daily between the two cities. It is believed, that from this source alone a railway might, *even on its first opening*, realize £10,000 per annum on a section only thirty-five miles long. A similar passenger traffic would doubtless spring up between Lahore and Mooltan; and it may be added, that the route viâ Kurrachee would be frequented by pilgrims to Mecca.

Again, if the advantages, present and prospective, of this line when constructed are great, so also are the facilities for its construction remarkable. Though the country situated above its northern terminus is rich and highly cultivated, yet the particular tract through which it will run is for the most part poor. Between Mooltan and Lahore, a distance of 240 miles, the country is a dead level, hard and waste. In the first place, then, there will be no cultivated or inhabited ground to be bought up. The price for the land will be almost nominal. There are no engineering difficulties whatever to be met with anywhere between Lahore and Mooltan. The Doab, or country lying between the two rivers Sutlej and Ravee, is elevated in the centre, and the sides slope gently off towards the rivers. From the centre or *back-bone* of the tract, there naturally run drainage channels to the rivers; consequently, while a road